

IUBMB Enzyme Nomenclature

EC 3.2.1.96

Common name: mannosyl-glycoprotein endo- β -*N*-acetylglucosaminidase

Reaction: Endohydrolysis of the N,N'-diacetylchitobiosyl unit in high-mannose glycopeptides and glycoproteins containing the -[Man(GlcNAc)₂]Asn-structure. One *N*-acetyl-D-glucosamine residue remains attached to the protein; the rest of the oligosaccharide is released intact

Other names: *N,N'*-diacetylchitobiosyl β -*N*-acetylglucosaminidase; endo- β -*N*-acetylglucosaminidase; mannosyl-glycoprotein endo- β -*N*-acetylglucosaminidase; di-*N*-acetylchitobiosyl β -*N*-acetylglucosaminidase; endo- β -acetylglucosaminidase; endo- β -(1 \rightarrow 4)-*N*-acetylglucosaminidase; mannosyl-glycoprotein 1,4-*N*-acetamidodeoxy- β -D-glycohydrolase; endoglycosidase S; endo-*N*-acetyl- β -D-glucosaminidase; endo-*N*-acetyl- β -glucosaminidase; endo- β -*N*-acetylglucosaminidase D; endo- β -*N*-acetylglucosaminidase F; endo- β -*N*-acetylglucosaminidase H; endo- β -*N*-acetylglucosaminidase L

Systematic name: glycopeptide-D-mannosyl-*N*⁴-(*N*-acetyl-D-glucosaminyl)₂-asparagine 1,4-*N*-acetyl- β -glucosaminohydrolase

Comments: A group of related enzymes.

Links to other databases: [BRENDA](#), [EXPASY](#), [KEGG](#), [WIT](#), CAS registry number: 37278-88-9

References:

1. Chien, S., Weinburg, R., Li, S. and Li, Y. Endo- β -*N*-acetylglucosaminidase from fig latex. *Biochem. Biophys. Res. Commun.* 76 (1977) 317-323.
2. Koide, N. and Muramatsu, T. Endo- β -*N*-acetylglucosaminidase acting on carbohydrate moieties of glycoproteins. Purification and properties of the enzyme from *Diplococcus pneumoniae*. *J. Biol. Chem.* 249 (1974) 4897-4904. [Medline UI: [74288197](#)]
3. Pierce, R.J., Spik, G. and Montreuil, J. Cytosolic location of an endo-*N*-acetyl- β -D-glucosaminidase activity in rat liver and kidney. *Biochem. J.* 180 (1979) 673. [Medline UI: [80020233](#)]
4. Pierce, R.J., Spik, G. and Montreuil, J. Demonstration and cytosolic location of an endo-*N*-acetyl- β -D-glucosaminidase activity towards an asialo-*N*-acetyl-lactosaminic-type substrate in rat liver. *Biochem. J.* 185 (1980) 261-264. [Medline UI: [80197728](#)]
5. Tai, T., Yamashita, K., Ogata-Arakawa, M., Koide, N., Muramatsu, T., Iwashita, S., Inoue, Y. and Kobata, A. Structural studies of two ovalbumin glycopeptides in relation to the endo- β -*N*-acetylglucosaminidase specificity. *J. Biol. Chem.* 250 (1975) 8569-8575. [Medline UI: [76069208](#)]
6. Tarentino, A.L., Plummer, T.H., Jr. and Maley, F. The release of intact oligosaccharides from specific glycoproteins by endo- β -*N*-acetylglucosaminidase H. *J. Biol. Chem.* 249 (1974) 818-824. [Medline UI: [74288197](#)]